slip to Zoyte 12/11

Work Order ID 53607

November 10, 2009 7:15:55 AM

PRELIMINARY ISSUE

Item ID: D3199-4 **Accept** **Setup Start** / **Stop**

Revision ID:

Item Name: Bracket

Start Date: 11/10/09 **Start Qty:** 2.00 **Cust Item ID:**

Required Date: 11/11/09 **Req'd Qty:** 2.00 **Customer:**

Reference:

Run Start / **Stop**

Approvals: **Process Plan:** ___ **Date:** ___ **Tooling:** ___ **Date:** ___

QC: ___ **Date:** ___ **SPC (Y/N):** ___ **Date:** ___

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp

Draw Nbr	Revision Nbr
D3199	C-PRELIM

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Accept Qty / Insp.
100	FLOW WATER JET	0.00	HB 9-11-10
Waterjet FLOW CNC Waterjet	**Memo** Cut as per Dwg D3199 Dwg Rev: PRE Prog Rev: Lim Deburr if required	0.00	6
110	QC2- Inspect parts off machine FAI/FAIB	0.00	HB 9-11-10
QC Quality Control	**Memo**	0.00	

Work Order ID 53607

November 10, 2009 7:15:55 AM

Item ID: D3199-4 **Accept**

Setup Start / Stop

Revision ID:

Item Name: Bracket

Start Date: 11/10/09 **Start Qty:** 2.00

Required Date: 11/11/09 **Req'd Qty:** 2.00

Cust Item ID:

Customer:

Reference:

Run Start / Stop

Approvals: **Process Plan:** ________ **Date:** ________ **Tooling:** ________ **Date:** ________

QC: ________ **Date:** ________ **SPC (Y/N):** ________ **Date:** ________

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 QC Quality Control	QC8- Inspect parts - second check **Memo**	0.00 0.00				2			05.11.10
130 Brake NC Brake NC	Bend as per dwg Small Fab **Memo**	0.00 0.00	SA 07/11/10			0	0		
140 QC Quality Control	QC5- Inspect part completeness to step on W/O **Memo**	0.00 0.00				2			05.11.11

Dart Aerospace Ltd

W/O: 53607	WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
09.11.10	130	1 ~~part shipped to eagle - now template for~~ ~~Dart~~ 1 for Template from Eagle	[signature]	—		[signature]	[signature] 09.11.10

Part No: D3199-4 PAR #: ______ Fault Category: ______ NCR: Yes (No) DQA: [signature] Date: NEW PARTS

Resolution: ______ Disposition: ______ QA: N/C Closed: ______ Date: ______

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
			Corrective Action Section B					
DATE	STEP	Description of NC Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector
09.11.10	130	2.24" IS ~~2.82~~ 2.28" ON ONE PART. R.C.: SETUP/~~PROTOTYPE~~ Prelim	[signature] 09.11.10	ACCEPTABLE DUE TO ADJUSTABILITY OF PART UPON INSTALLATION DUE TO SLOTS.	SB 09/11/10	[signature] 09.11.11	[signature] 9.11.10	[signature] 05.11.11

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Work Order ID 53607

November 10, 2009 7:15:56 AM

Item ID: D3199-4 **Accept** **Setup** **Start** / **Stop**

Revision ID:

Item Name: Bracket

Start Date: 11/10/09 **Start Qty:** 2.00 **Cust Item ID:**

Required Date: 11/11/09 **Req'd Qty:** 2.00 **Customer:**

Reference:

Run **Start** / **Stop**

Approvals: **Process Plan:** ______ **Date:** ______ **Tooling:** ______ **Date:** ______

QC: ______ **Date:** ______ **SPC (Y/N):** ______ **Date:** ______

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 Powdercoat Powder Coating	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 M112558 **Memo** START TIME: 9:00AM OVEN TEMPERATURE: 320°F FINISH TIME: 9:30AM	0.00 0.00	⇒ [illegible] 09/11/19			X2	Ø		
160 QC Quality Control	QC3- Inspect Part Finish **Memo**	0.00 0.00	[illegible] 09-11-19			2.			
170 Packaging Packaging	Identify as per dwg & Stock Location:______ **Memo** SHIP TO EAGLE 12/11	0.00 0.00				9/11/19 [illegible]			

POSITIVE RECALL
EFFECTIVE 09.11.10 AUTH [illegible]
DATE 09.11.19
RELEASED [illegible]
09.11.20

[illegible] 09.11.19

Work Order ID 53607

November 10, 2009 7:15:56 AM

Item ID: D3199-4 **Accept**

Setup **Start**

Revision ID:

Stop

Item Name: Bracket

Start Date: 11/10/09 **Start Qty:** 2.00 **Cust Item ID:**

Required Date: 11/11/09 **Req'd Qty:** 2.00 **Customer:**

Reference:

Run **Start**

Approvals: **Process Plan:** ______ **Date:** ______ **Tooling:** ______ **Date:** ______

Stop

QC: ______ **Date:** ______ **SPC (Y/N):** ______ **Date:** ______

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC21- Final Inspection - Work Order Release	0.00							
QC	**Memo**	0.00				[signature] 09-11-20			
Quality Control									

Picklist Print

November 10, 2009 7:15:54 AM

1

Work Order ID: 53607

Parent Item: D3199-4

Parent Item Name: Bracket

Start Date: 11/10/09 **Required Date:** 11/11/09

Comments: IPP RevA: RevC-prelim DD verified by:EC

Start Qty: 2.00 **Required Qty:** 2.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M304S20GA 304/316 .040 Sheet		Purchased	No			100	sf	381.2528	0.7097		IR 9-11-10	

Warehouse Location	Loc Qty	Loc Code	
Main Warehouse			
MAT	381.2528158		
110076	1.37053684		
111571	0.94		
112567	39.7844789		112567
112885	83.1578		
113062	192		
113077	64		

(2)

DART AEROSPACE LTD	Work Order:	53607
Description: BRACKET	Part Number:	D344-4
Inspection Dwg: D344-4 Rev: PRELIM		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

[x] First Article [ ] Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.615	+/- .010	.623	✓			
.395	+/- .010	.389	✓			
.75	+/- .030	.745	✓			
2.75	+/- .030	2.746	✓			
4.036	+/- .010	4.032	✓			
2.971	+/- .010	2.970	✓			
16.34	+/- .030	16.34	✓			
.040	+/- .010	.034	✓			

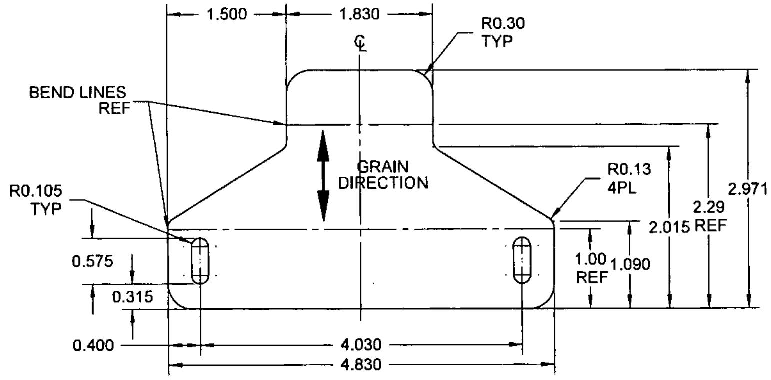
Measured by:	JB
Date:	9-10-11

Audited by:	[signature]
Date:	5.11.10

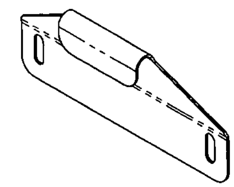
Prototype Approval:	N/A
Date:	N/A

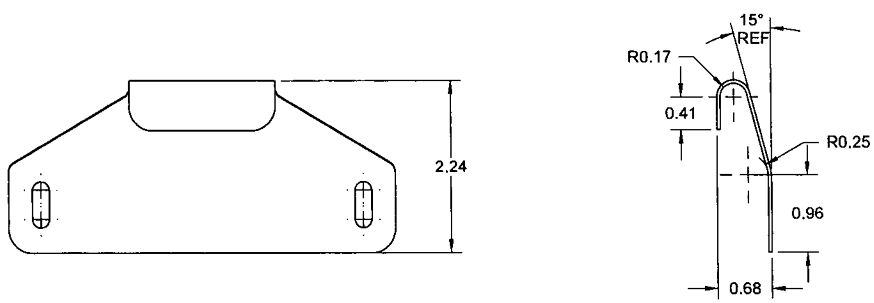
Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

w/o 53607



D3199-1F FLAT PATTERN





D3199-1 BRACKET
MADE FROM D3199-1F

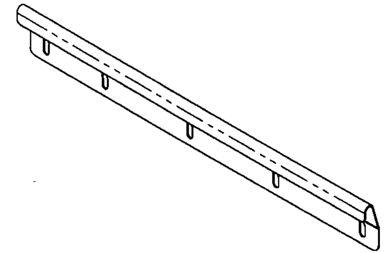
PRELIMINARY ISSUE
09/11/19

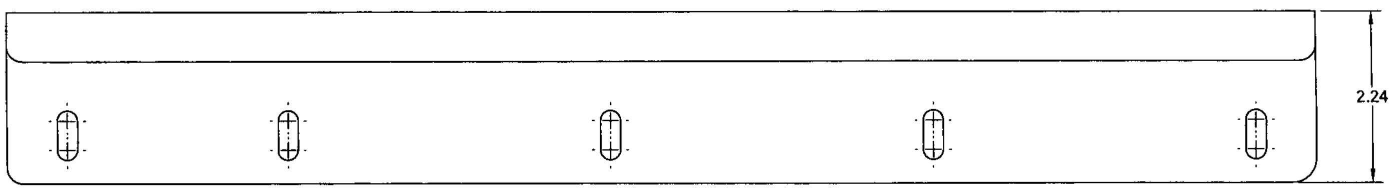
NOTES:
1) MATERIAL: AISI 304/316 SS SHEET, 0.040 THICK, ANNEALED, 2B FINISH
PER MIL-S-5059, OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S20GA
2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-1" AND B/N USING FINE POINT PERMANENT INK MARKER
7) WEIGHT: 0.11 lbs

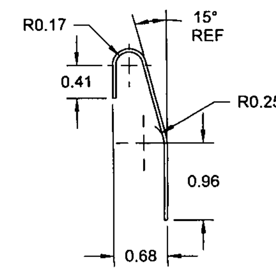
REV.	DESCRIPTION	BY	DATE
C	ADD -3/-4 PART (SHEET 2-4)	[initials]	09.10.05
B	2.24 WAS 2.142; ADD FINISH; UPDATE DWG	CB	06.11.01
A	NEW ISSUE	CP	03.08.05

DESIGN	[initials]	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	[initials]	
CHECKED	[initials]	DRAWING NO. D3199 — REV. C — SHEET 1 OF 4
MFG. APPR.	[initials]	
APPROVED	[initials]	TITLE BRACKET — SCALE NTS
DE APPR.		
DATE	09.10.05	

W/O 53607







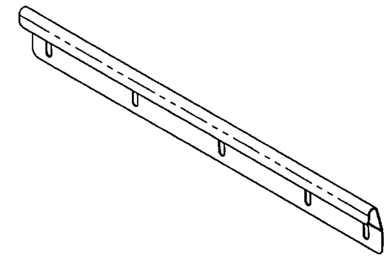
(C) **D3199-3 BRACKET**
MADE FROM D3199-3F

PRELIMINARY ISSUE
09/11/19

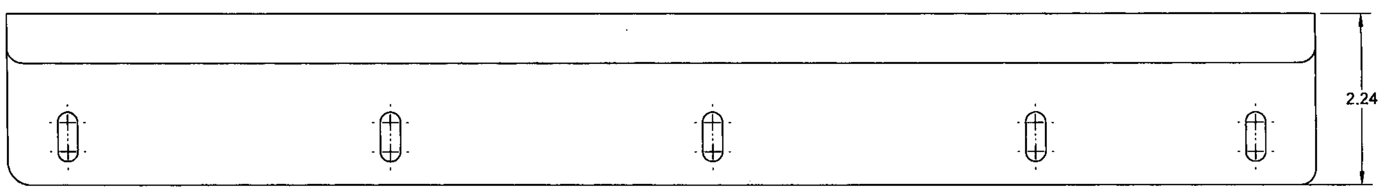
NOTES:
1) MATERIAL: MADE FROM D3199-3F
2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-3" AND B/N USING FINE POINT PERMANENT INK MARKER
7) WEIGHT: 0.55 lbs

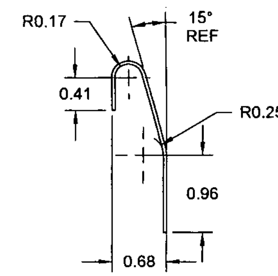
		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DESIGN		
DRAWN		
CHECKED		DRAWING NO. D3199 — REV. C — SHEET 2 OF 4
MFG. APPR.		
APPROVED		TITLE BRACKET — SCALE NTS
DE APPR.		
DATE	09.10.05	

W/O 53607



PRELIMINARY ISSUE



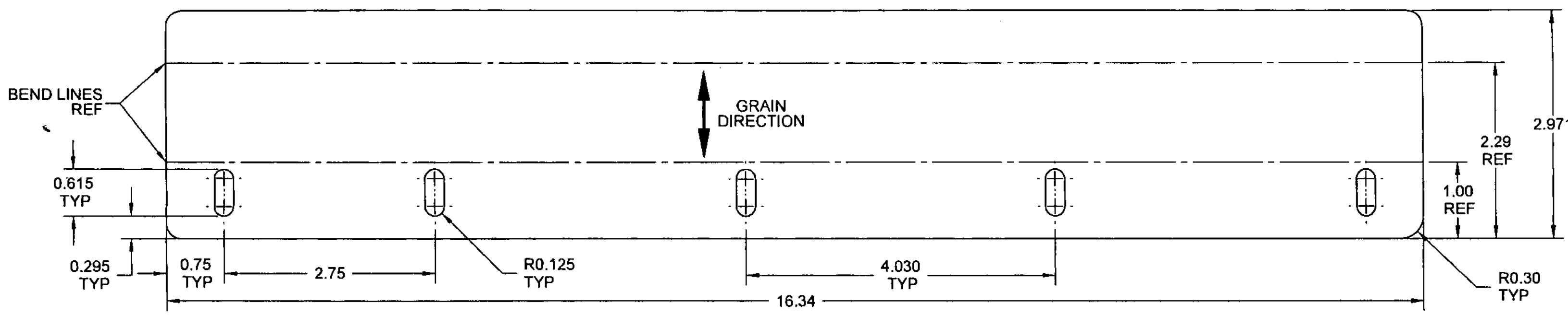


D3199-4 BRACKET (C)
MADE FROM D3199-3F

PRELIMINARY ISSUE
WP 09/11/19

NOTES:
1) MATERIAL: MADE FROM D3199-3F
2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-4" AND B/N USING FINE POINT PERMANENT INK MARKER
7) WEIGHT: 0.55 lbs

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. D3199 — REV. C — SHEET 3 OF 4
MFG. APPR.		
APPROVED		TITLE BRACKET — SCALE NTS
DE APPR.		
DATE	09.10.05	



C D3199-3F FLAT PATTERN

PRELIMINARY ISSUE

NOTES:
1) MATERIAL: AISI 304/316 SS SHEET, 0.040 THICK, ANNEALED, 2B FINISH
PER MIL-S-5059, OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S20GA
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.55 lbs

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. D3199 — REV. C — SHEET 4 OF 4
MFG. APPR.		
APPROVED		TITLE BRACKET — SCALE NTS
DE APPR.		
DATE	09.10.05	

L Lacelle

From: Harvey Siemens [hsiemens@dartaero.com]
Sent: November 11, 2009 11:30 AM
To: 'L Lacelle'
Subject: RE: D3199-3/-4

Then I guess we better not have them painted – Thanks Linda

Regards,

Harvey Siemens
Mechanical Designer
DART Aerospace Ltd.

P: 403-717-0328
F: 403-717-1288
E: hsiemens@dartaero.com
W: www.dartaero.com
M: 1060 McTavish Road NE, Calgary, Alberta, T2E 5G9

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: Wednesday, November 11, 2009 9:28 AM
To: 'Harvey Siemens'
Subject: RE: D3199-3/-4

I afraid the paint may chip.
LL

From: Harvey Siemens [mailto:hsiemens@dartaero.com]
Sent: November 11, 2009 11:24 AM
To: 'L Lacelle'
Subject: RE: D3199-3/-4

If we paint them can they still be formed or will the paint flake/chip off?

Regards,

Harvey Siemens
Mechanical Designer
DART Aerospace Ltd.

P: 403-717-0328
F: 403-717-1288
E: hsiemens@dartaero.com
W: www.dartaero.com
M: 1060 McTavish Road NE, Calgary, Alberta, T2E 5G9

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: Wednesday, November 11, 2009 9:04 AM
To: 'Harvey Siemens'
Cc: 'David Shepherd'; 'Mike Petsche'
Subject: RE: D3199-3/-4

Harvey do you want these sent to you unpainted? I assume so, but just want to check
LL

From: Harvey Siemens [mailto:hsiemens@dartaero.com]
Sent: November 9, 2009 1:35 PM
To: 'Kim Johnston'; 'David Duval'; 'L Lacelle'
Cc: David Shepherd; 'Mike Petsche'
Subject: D3199-3/-4

General question for everyone but specifically for Linda and David D.

As a follow up to the previous email regarding production of 2 each D3199-3/-4s. Is it possible to get these parts off the Calgary for Friday trial fit? Is this too tight of a time frame?

Let us all know, thanks.

Regards,

Harvey Siemens
Mechanical Designer
DART Aerospace Ltd.

P: 403-717-0328
F: 403-717-1288
E: hsiemens@dartaero.com
W: www.dartaero.com
M: 1060 McTavish Road NE, Calgary, Alberta, T2E 5G9

From: Mike Petsche [mailto:mpetsche@dartaero.com]
Sent: Monday, November 09, 2009 10:52 AM
To: 'Harvey Siemens'; 'David Shepherd'
Cc: Bill Beckett
Subject: FW:
Importance: High

I guess this BHT are for the DND guys? I guess this means we can release.......

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: Monday, November 09, 2009 8:32 AM
To: 'Mike Petsche'
Cc: 'Bill Beckett'; 'Melanie Fauteux'; 'Amy Sauve'
Subject: FW:
Importance: High

Looks like we received the order from BHT Calgary, still have not received an ECN for these....??

LL

From: Amy Sauve [mailto:asauve@dartaero.com]
Sent: November 9, 2009 8:27 AM
To: 'L Lacelle'
Subject:

Linda

We received an order for the following brackets, and they are not in the system as of yet. D3199-3 LH....D3199-4 RH.
Could you please advise me when the NCN has been completed so I can continue with this order.
Thank
AMY SAUVE

L Lacelle

From: David Shepherd [dshepherd@dartaero.com]
Sent: November 17, 2009 2:31 PM
To: 'L Lacelle'; 'Peggy McDonald'
Cc: 'Mike Petsche'; 'Bill Beckett'; 'Harvey Siemens'
Subject: RE: Door Track Parts for DND

Yup ... to your attention, Linda

David

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: Tuesday, November 17, 2009 12:18 PM
To: 'David Shepherd'; 'Peggy McDonald'
Cc: 'Mike Petsche'; 'Bill Beckett'; 'Harvey Siemens'
Subject: RE: Door Track Parts for DND

Yes, we will, did you send to my attention?

Thx
LL

From: David Shepherd [mailto:dshepherd@dartaero.com]
Sent: November 17, 2009 1:33 PM
To: 'Peggy McDonald'
Cc: 'Mike Petsche'; 'L Lacelle'; 'Bill Beckett'; 'Harvey Siemens'
Subject: Door Track Parts for DND

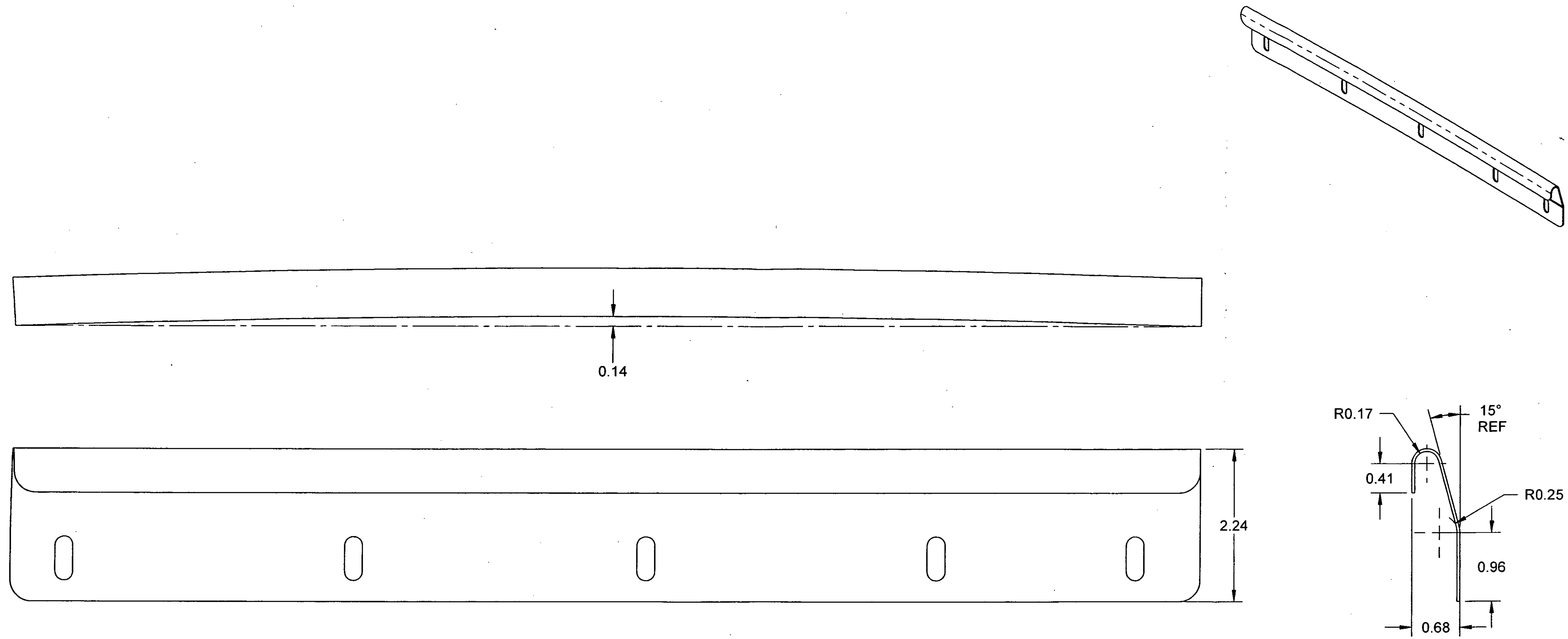
Peggy,

Just to keep you in the loop, we received and bent the new door track pieces in Calgary.
We have successfully installed these pieces on a DND door here at Eagle and installed the door on the aircraft.
The door doesn't slide quite as well as before, but we do not believe this is because there is a problem with the new brackets.
With the longer bracket, there is increased friction.
Also, we didn't spend a lot of time adjusting the new brackets to optimize the fit.
Anyways, Harvey and I feel comfortable with sending these brackets to DND for trial.
They are on their way back to Hawkesbury for painting and I suspect Linda will be able to ship on Friday.

Linda,

Both ~~sets of brackets on their~~ way back ~~to you.~~
Brackets #1 and #2 should be painted and sent to DND.
~~Brackets #3 and #4 should be retained for Dart reference.~~
He also sent the bend tool that Eagle devised to maintain the "J" as they rolled the brackets.

Regards,
David

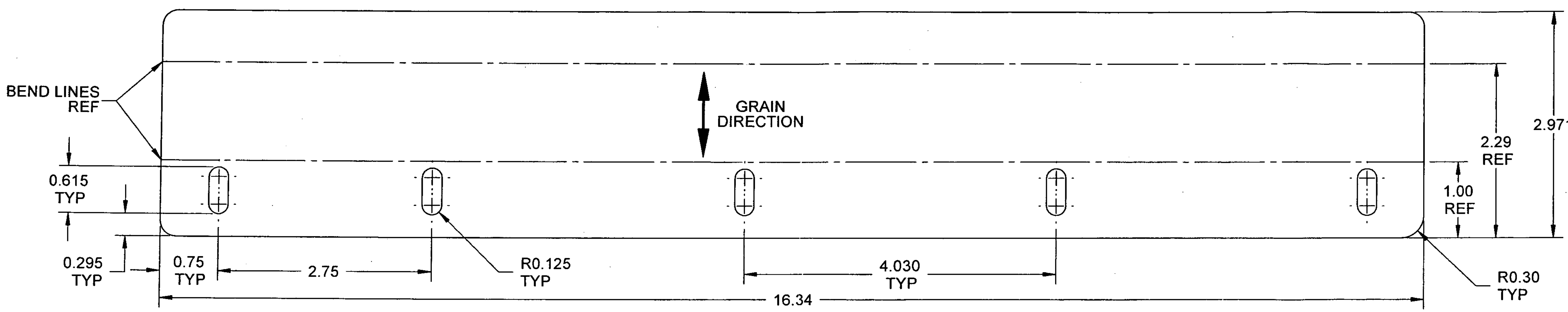


C D3199-4 BRACKET
MADE FROM D3199-3F

RELEASED 2009-11-20

NOTES:
1) MATERIAL: MADE FROM D3199-3F
2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-4" AND B/N USING FINE POINT PERMANENT INK MARKER
7) WEIGHT: 0.55 lbs

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. D3199 — REV. C — SHEET 3 OF 4
MFG. APPR.		
APPROVED		TITLE BRACKET — SCALE NTS
DE APPR.		
DATE	09.11.19	



C **D3199-3F FLAT PATTERN**

RELEASED 2009-11-20

NOTES:
1) MATERIAL: AISI 304/316 SS SHEET, 0.040 THICK, ANNEALED, 2B FINISH
PER MIL-S-5059, OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S20GA
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.55 lbs

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. D3199 — REV. C — SHEET 4 OF 4
MFG. APPR.		
APPROVED		TITLE BRACKET — SCALE NTS
DE APPR.		
DATE	09.11.19	